

# **PERPENDICULAR MRAM WITH HIGH MAGNETIC TRANSITION AND LOW PROGRAMMING CURRENT**

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## **ABSTRACT OF THE DISCLOSURE**

An invention is provided for a magnetic random access memory (MRAM) cell. The MRAM cell includes a first wordline and a first bitline perpendicular to the wordline. Disposed at an intersection of the first wordline and the first bitline is an MTJ device having a perpendicular magnetic orientation. To program the MRAM cell, current is  
10 driven through the two bitlines and two wordlines that are adjacent to the memory cell. As a result, the MRAM cell has a high magnetic transition and low programming current.